



# **What is the ERA?**

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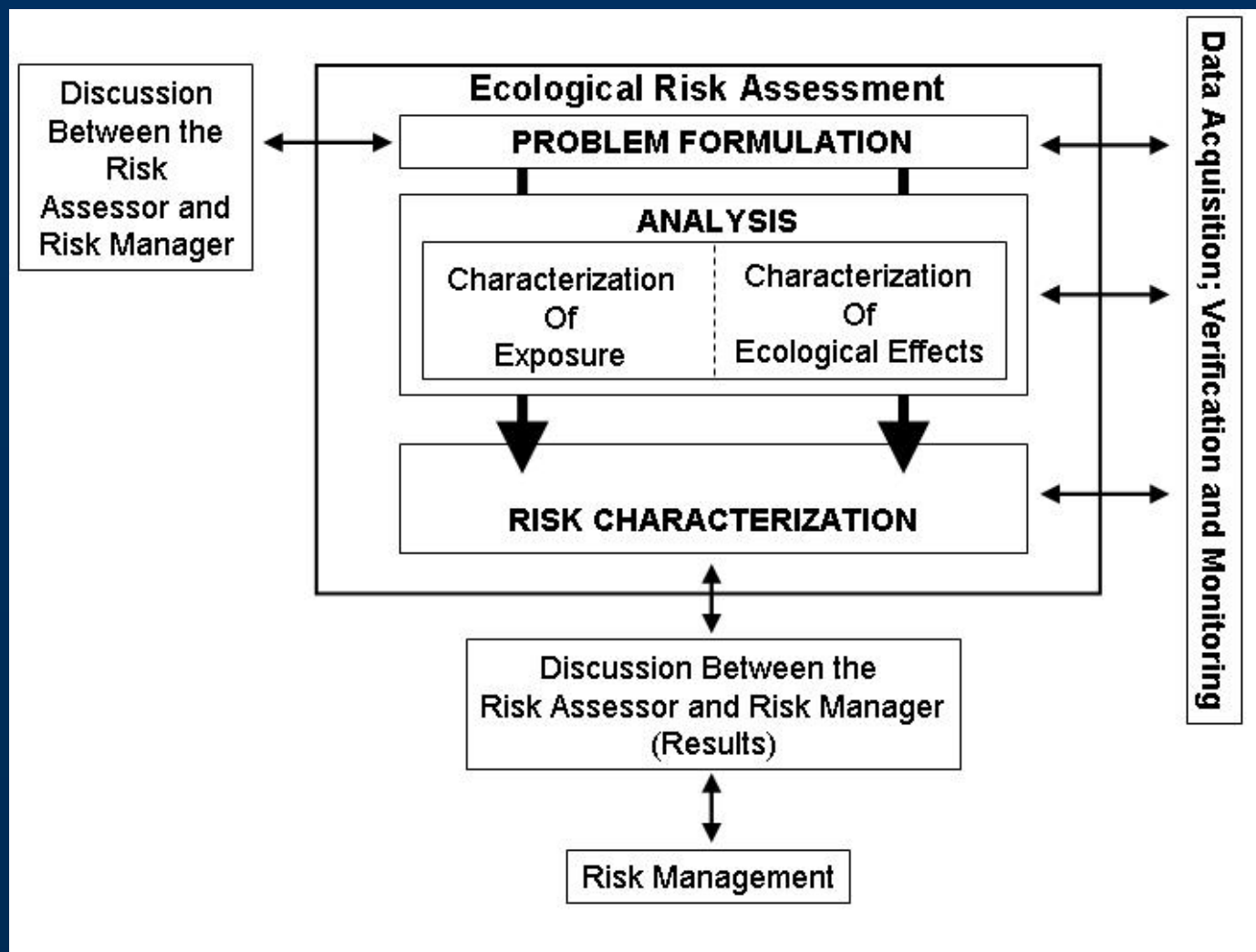
# Overview of Presentation

- ERA framework
- Conceptual model
- Contaminants of Concern (COCs)
- Assessment endpoints
- Weight of Evidence (WOE) assessment
- Summary of risks

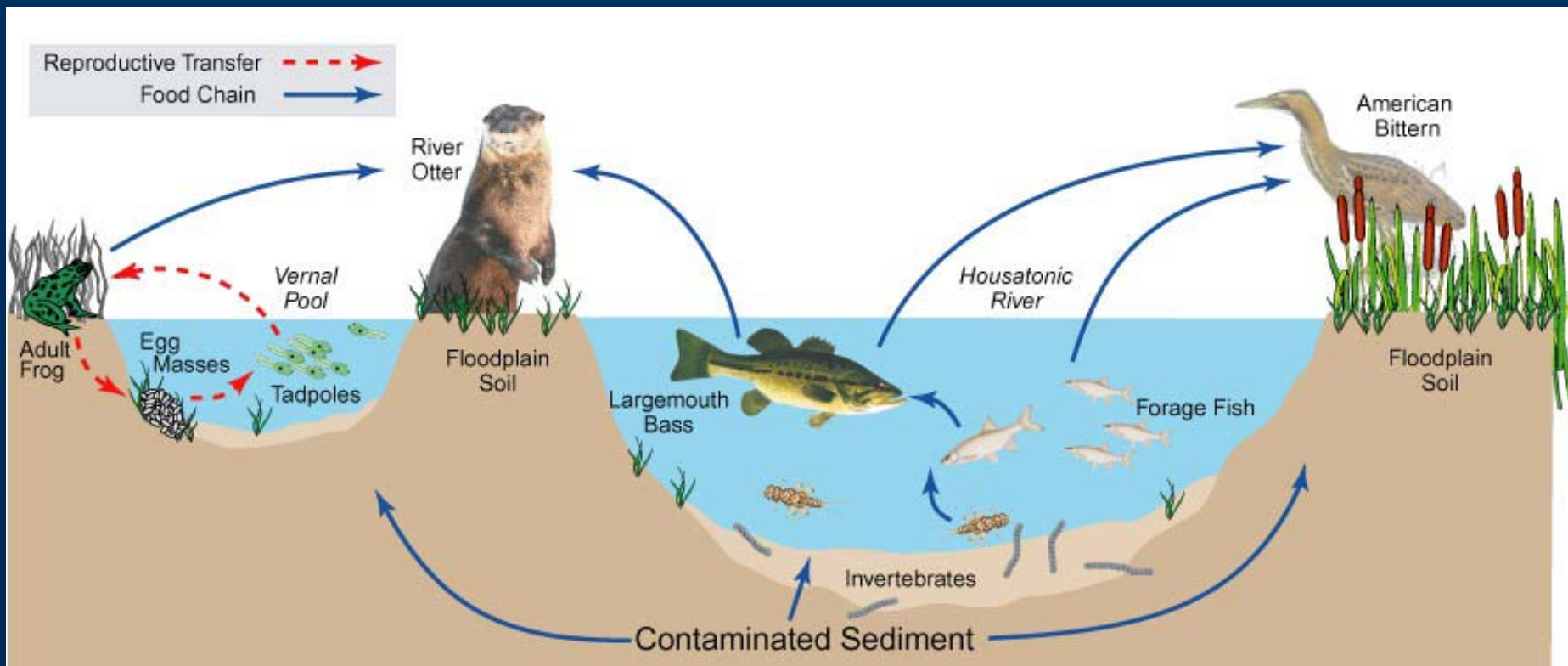




# Framework for Ecological Risk Assessment (ERA)



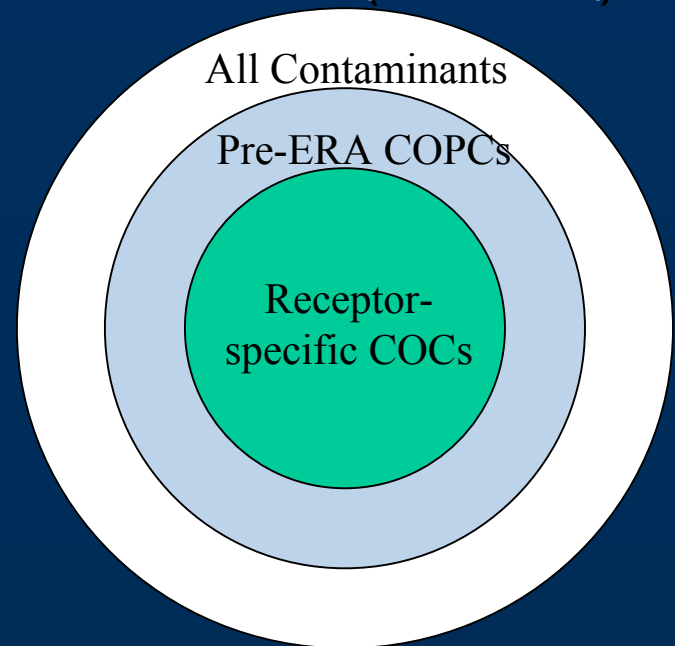
# Conceptual Model





# Contaminants of Concern

- Two-fold screening assessment
  - identify contaminants of potential concern (COPCs)
  - receptor-specific screening
- Aquatic receptors
  - **PCBs**
  - dioxins and furans
  - several PAHs
  - several metals
- Wildlife receptors
  - **PCBs**
  - 2,3,7,8-TCDD Equivalence (TEQ)





# Assessment Endpoints

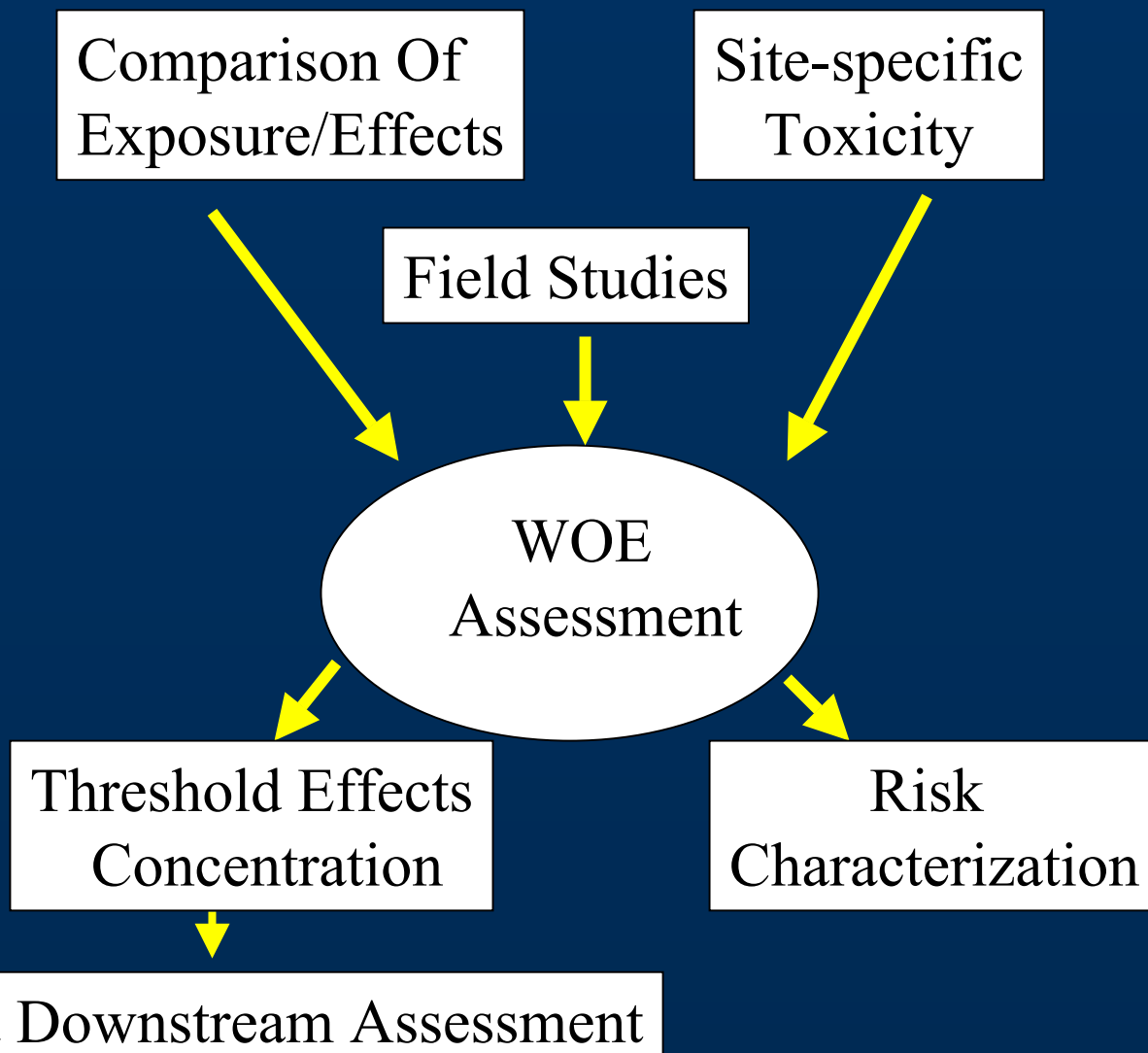
- Community condition, survival, reproduction, and development of:
  - Benthic invertebrates
  - Amphibians
- Survival, growth and reproductive success of:
  - Fish
  - Insectivorous birds
  - Piscivorous birds
  - Piscivorous mammals
  - Omnivorous and carnivorous mammals
  - Endangered species



# Weight of Evidence Assessment

WOE (Menzie et al. 1996) is determined by 3 characteristics:

- weight
- magnitude of response
- concurrence





# Summary of Risks in PSA

Summary of the Range of Hazard Quotients from Total PCBs for Selected Species

